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Courtship Signaling and Adolescents: "Girls Just Wanna Have Fun"?

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Ethological researchers have demonstrated that during courtship, women exhibit a constellation of subtle facial expressions and gestures commonly labeled flirting. According to the tenets of evolutionary psychology, women are expected to use nondirect tactics to signal interest in a potential partner because their greater investment in the outcome requires the selection of a partner more willing to invest resources in the relationship. Such tactics may require experience to refine signaling effectiveness. In the current research, I attempted to uncover evidence for developmental differences in courtship behavior by using field methodology. Adolescent girls were covertly observed in mixed-gender settings to document the number and type of facial expressions and gestures used to indicate interest in boys. These data were compared to similar work done with women in the construction of a catalog of nonverbal courtship signals. The results showed girls used many of the same signals commonly exhibited by women in earlier studies. There were, however, striking differences, such as the more frequent use of play or teasing behavior and the exaggerated form of many signals. These findings help to explain the process through which women acquire and refine the nonverbal behaviors used in courtship.

Largely ignored in the study of adolescents' sexual behavior is what goes on among teenagers during the countless hours they spend in the malls or on the streets checking each other out. Similarly, there continues to be a dearth of information about the flirting patterns of adults. Although courtship behavior is commonly described as part of a behavioral ethogram for nonhuman species, sexual research protocols have, by and large, ignored courtship signaling in humans.

A constellation of facial expressions and gestures that function as attractants in humans has been documented by those generally interested in nonverbal communication, such as Key (1975), Knapp (1978), and Nieremberg and Calero (1973). In this regard, Eibl-Eibesfeldt (1971) described the "coy glance," a combination of a half smile and indirect eye gaze, that he observed in women across the globe. Similarly, in the context of psychotherapy, Scheflen (1965) conceptualized courtship behavior as involving four categories: courtship readiness, preening behavior, positional cues, and actions of appeal or invitation. Kendon and Ferber (1973) described some signals they discovered while researching greeting rituals. Kendon (1975) followed this study of greeting behaviors with a more thorough description of what happens during a kissing round. He discovered that the woman's behavior, particularly her facial expressions, functioned as a regulator in modulating the man's behavior.

Those working from an ethological perspective have provided information as well. Seminal reports include the work of Birdwhistell (1970) and Morris (1971). Birdwhistell suggested 24 steps from initial male/female contact to a fully intimate, sexual relationship and a sequence to these steps. In contrast, Morris suggested 12 steps that couples in Western culture go through from initial contact through intimacy. He indicated that the steps have an order that usually is followed in female/male relationships. The steps are as follows: (1) eye to body, (2) eye to eye, (3) voice to voice, (4) hand to hand, (5) arm to shoulder, (6) arm to waist, (7) mouth to mouth, (8) hand to head, (9) hand to body, (10) mouth to breast, (11) hand to genitals, and (12) genitals to genitals or mouth to genitals. One who skips steps or fails to respond to a step may be seen as fast or slow.

Later reports were offered by Givens (1978), Jesser (1978), Lockard and Adams (1980), and McCormick, Perper, and Jones (1983). Givens (1978) described four cases of courtship behavior documented by him as the nonverbal behaviors used by men and women in five phases: attention, recognition, interaction, sexual arousal, and resolution. In contrast, Jesser (1978) used a questionnaire to determine which sexual signaling behaviors were used by men and women and by their partners. Nonverbal behaviors reported included eye contact, touching, and teasing or game playing, such as light "roughhousing." Lockard and Adams (1980) developed a preliminary ethogram of courtship behaviors by observing mixed-sex dyads aged 13-28 years in public settings. They described nonverbal behaviors such as kissing, hand linking, embracing, self-grooming, gazing, smiling, laughing, food sharing, touching, and playing in established couples. McCormick et al. (1983) also used the observation of public courtship as their method of documenting signaling.

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Although they worked with adult strangers meeting for the first time in bars, they listed behaviors similar to those observed by Givens (1978) and Lockard and Adams (1980).

Cary (1976) discovered that the woman, through eye contact, controlled the course of interaction with a male stranger, both in the laboratory and in singles' bars. Perper (1985) gave a detailed description of courtship, stressing an escalation-response process in which women play a key role in escalation or de-escalation. The steps in this process are approach, turn, first touch, and steady development of body synchronization.

Although these reports are clearly valuable, most researchers addressed courtship very generally, and some failed to recognize the importance of the female role in the courtship process. What was needed was a more complete ethogram of women's nonverbal courtship signals. To compile such a catalog of flirting behavior exhibited by women involved in initial heterosexual interaction, more than 200 adults were observed (Moore, 1985) in field settings such as singles' bars, restaurants, and parties. As suggested by Hinde (1979), consequential and contextual evidence was used in conjunction to justify the claim that some observed behaviors were, indeed, human-courtship displays. Therefore, female courtship behaviors were defined as that specific subset of nonverbal behavior that consistently resulted in male attention. Second, these behaviors were commonly directed at potential male partners in courtship contexts but were absent or exhibited at low frequencies in noncourtship settings. A set of 52 nonverbal courtship behaviors, including glancing, primping, smiling, laughing, nodding, kissing, requesting aid, touching, and caressing, resulted. These courtship signals served as attractants and elicited the approach of a potential male partner or ensured the continued attention of a partner. In these studies it was shown, furthermore, that women have the prerogative of initiating interactions through subtle behaviors such as repeated eye contact or, less frequently, through more overt behaviors such as initiating conversation and are actively involved in pacing the courtship process. Later researchers (Moore & Butler, 1989) revealed that courtship signaling is far more instrumental than other factors, such as physical attractiveness, in eliciting a man's attention. In addition, courtship signaling is so potent that trained observers were able to use its frequency to predict accurately the outcome of future interactions (Moore & Butler, 1989).

Research has shown, therefore, that the cultural myth that the man is always the sexual aggressor, pressing himself on a reluctant woman, is incorrect. According to Cary (1976), Moore (1985), and Perper (1985), the woman often makes the first move. Because her move is subtle—perhaps standing close to her target or looking at him—it is understandable how men have come to be seen as initiators in the courtship process. But in fact, neither gender dominates a successful flirtation. Each person takes a turn at influencing the partner and at signaling that the other's influence attempts are welcome. Women, however, seem to be responsible for the earlier stages of courtship. In addition to the observations reported previously, Perper and Weis (1987) discovered through essays that women could accurately depict the behaviors used in the early stages of courtship but then had difficulty articulating the later behaviors associated with moving toward sexual intercourse.

Evolutionary psychology offers a framework that can explain the use of sex-specific strategies in courtship signaling. In most species, intrasexual competition will be greater within the sex that puts lower investment in offspring, (i.e., the male; Trivers, 1972). Men, therefore, should tend toward overt advertisement of their qualities. Women, on the other hand, should be interested in appraising the qualifications of the man, given their need for assistance during prolonged pregnancy and while nurturing dependent offspring. Across time, then, those women who found men willing to devote time and resources experienced greater reproductive success than those who did not select for these critical qualities. Men, however, would be expected to optimize their biological potential by selecting women who exhibited characteristics commonly associated with fertility, such as youth and good health. Men elect one and/or two strategies to increase their fitness. A short-term (and low-investment) sexual strategy would enable men to father offspring in whom their investment is small. These children may or may not live to adulthood without the benefit of their father's material resources and care. Men may also employ a long-term strategy in which they invest time, energy, and resources in children, making it more likely that these offspring will survive. Men, furthermore, would be expected to try to ensure that the resources they donate do, indeed, go to their offspring. They should opt for partners who appear to be selective, rather than generally available.

From these theoretical considerations we can propose gender-specific signaling between humans of the opposite sex. Women's flirtation would be expected to be indirect. This is not to say that women would be passive during courtship. Instead, they should have a subtle, yet powerful means of exerting influence over the course of a flirtation. Although women are active in their own right, their power may be overlooked by male partners because it is indirect. The use of subtle indicators of interest on the part of women may not only allow men to maintain the illusion of dominating courtship, but also make it more likely that women will be afforded the opportunity to

assess the man's willingness to employ a long-term sexual strategy in which he invests in the relationship. Being choosy about the selection of a partner is adaptive for women, given their greater investment. Across evolutionary history, those women who expressed preferences for high-quality partners experienced greater reproductive success than those women who did not. These strategies need not be consciously implemented nor desired to ensure that a woman not lose through making a poor choice of a sexual partner. A repertoire of nonverbal behaviors that are subtle and indirect can be used by women to initiate and pace the course of a relationship. These same courtship signals afford women the power and time to negotiate a relationship with a partner willing and able to contribute resources. The use of direct signaling early in the relationship may not provide an opportunity for a woman to discover whether the man she has expressed an interest in is truly available and of high quality. Later direct signaling may confirm a woman's continuing interest in a good partner.

Still in question, however, is the process through which women acquire these nonverbal courtship behaviors. It is doubtful that full-blown courtship signaling, in all its elegance and subtlety, appears suddenly in women at age 18. It seems likely that some learning process would allow for the refinement of nonverbal courtship signaling. At this point, little is known about the role of learning in the development of flirting. The observation of courtship signaling in girls may then provide valuable insight into developmental similarities or differences in flirting expertise. On the other hand, given that some signals described previously are facial displays and that these signals may have biological significance for mating success, one would expect, at the very least, a biological predisposition readily to acquire these behaviors. Indeed, Ekman (1972) provided compelling evidence that facial expressions have strong biological underpinnings by showing that people in many cultures could accurately decode the facial expressions for basic emotions such as fear and anger. This is not to say that the role of learning in the development of behaviors, such as mating, that are key to genetic success are ignored in evolutionary theory. Indeed, evolutionary theorists (Daly & Wilson, 1978; Wilson, 1978) have posited that behavior is affected by both genetically-based tendencies and responsiveness to environmental contingencies. Our genetic legacy has endowed us with the capacity to make use of learning those behaviors that are adaptive in particular environments. Courtship signaling, intimately connected to mating, may provide a good example of the intertwining of nurture and nature. After the signaling of girls has been compared to that of women, we may better understand the process through which courtship signaling is acquired and its adaptive significance.

Field methodology is the logical choice for uncovering what happens in teenagers during the initial phase of courtship. Although it would be possible to ask adolescents what they do to attract the attention of other-gendered peers, it is unlikely that one would get the same insight into their behavior as that obtained from watching peer relationships unfold. The use of covert natural observation would also appear to help us understand what girls do when unaware of the surveillance of adults. In addition, using similar methodology to that of earlier studies allows some comparisons to be made to results obtained while observing adults.

My goal with this research, then, was to use observational methods to explore the use of nonverbal signaling in girls. Because descriptions of nonverbal courtship signals used by women have been provided by several authors discussed previously, it is possible to compare the behaviors of girls to those commonly exhibited by women. Three hypotheses were articulated regarding the use and effectiveness of courtship behaviors on the part of girls. Given that an efficient courtship-signaling system is necessary by the age when women traditionally start making lifetime partner choices, it is likely that some flirting is to be expected in children who have reached puberty. Therefore, girls are predicted to direct a variety of nonverbal signals of interest toward male peers, but, because of their inexperience, girls are not as likely to make use of the breadth of signaling employed by women. Second, because in the past (Moore & Butler, 1989) signaling frequency has been shown to be correlated with approaches by men, the lower signaling levels of girls when compared to those of women should attract fewer responses from boys when compared to those of men. Third, given their inexperience, girls will show a preference for those signals that are familiar to them, such as play behavior or teasing.

Method

Sample

The girls observed were 100 randomly selected girls judged to be between the ages of 13 and 16. No systematic examination was made of background variables because of the restriction imposed by the maintenance of anonymity. Schools and malls in the area where the research was done, however, serve an upper middle class population in a midsize, Midwestern city. Ninety-two percent of the observed girls were White; the other eight percent were Black, Asian, or Hispanic. One observed girl was deaf, as evidenced by her use of American Sign Language.

Measures

I recorded all instances of nonverbal courtship behaviors from a catalog compiled on women (Moore, 1985) for each girl, as well as approaches made to the observed

girls by boys. These behaviors were culled from all nonverbal behaviors exhibited by participants using consequential evidence. That is, the behaviors resulted in male attention across participants. These behaviors also were found in greater frequencies in courtship settings such as bars (contextual evidence). Taken together, consequential evidence and contextual evidence provided the definition of function for these behaviors as courtship signals (Moore, 1985). The presence of these nonverbal courtship signals in girls would similarly function as a means of attracting or maintaining the attention of potential partners when exhibited in courtship settings. The recorded behaviors were facial and head patterns, gestures, and posture patterns.

Descriptions of Nonverbal Courtship Behaviors

A number of different facial and head patterns were seen in the women observed for the formulation of the catalog. In the *Type I glance* (the room- or group-encompassing glance), the woman moved her head rapidly, orienting her face around the room. This movement was followed by another head movement that reoriented the woman's face to its original position. The total duration of the glance was brief, 5-10 seconds, with the woman not making eye contact with any specific individual.

The glancing behavior called the *Type II glance* (the short, darting glance) was a courtship behavior that appeared directed at a particular man. The woman directed her gaze at the man, then quickly away (within three seconds). The target axis of the horizontal rotation of the head was approximately 25-45 degrees. This behavior was usually repeated in bouts, with three glances the average number per bout.

In contrast, *Type III glance* (gaze fixate) consisted of prolonged (more than three seconds) eye contact. The woman looked directly at the man; sometimes her glance was returned. Again, this behavior was seen several times in a period of minutes in some women.

Another movement involving the eye area was an *eyebrow flash,* which consisted of an exaggerated raising of the eyebrows of both eyes, followed by a rapid lowering to the normal position. The duration of the raised eyebrow portion of the movement was approximately two seconds.

Several behaviors involved the head and neck region. In *head tossing,* the head was flipped backwards so that the face was tilted upwards briefly (less than five seconds). The head was then lowered to its original position. The head toss was often combined with or seen before the hair flip. The *hair flip* consisted of the woman raising one hand and pushing her fingers through her hair or running her palm along the surface of her hair. Some women made only one hand movement, whereas in others there were bouts of hair stroking; the woman put her hand to her hair several times within a 30-second interval. The *head nod* was seen when the woman was only a short distance from the man. Usually the head nod was exhibited during conversation; the head was moved forward and backward on the neck, which resulted in the face of the woman moving up and down. Another head pattern was called *face to face.* In this behavior pattern, the head and face of the woman were brought directly opposite the man's face so that noses almost touched, a distance of approximately five cm. A final behavior involving the head and neck was the *neck presentation.* The woman tilted her head sideways to an angle of approximately 45 degrees. This resulted in the ear almost touching the ipsilateral shoulder, thereby exposing the opposite side of the neck. Occasionally the woman stroked the exposed neck area with her fingers.

A number of signals involved the lips and mouth. *Lipstick application* was a rare behavior. The woman directed her gaze so that she made eye contact with a particular man. Then slowly she applied lipstick to her lips. She engaged in this behavior for some time (15 seconds), repeatedly circling her lips. In contrast, the *lip lick* was seen quite often. The woman opened her mouth slightly and drew her tongue over her lips. Some women used a single lip lick, wetting only the upper or lower lip, whereas others ran the tongue around the entire lip area. The *lip pout* was another behavior involving the mouth. The lips were placed together and protruded. Generally, the lower lip was extended farther than the upper lip, so that it was fuller in appearance.

Smiling consisted of the corners of the mouth being turned upward. This resulted in partial or sometimes full exposure of the teeth. In some women the smile appeared fixed and was maintained for long periods of time. The *coy smile* differed from the smile in that the woman displaying a coy smile combined a half-smile (the teeth were often not displayed or only partially shown) with a downward gaze or eye contact that was very brief (less than three seconds).

Laughing and giggling were generally responses to another person's comments or behavior. In some women the *laugh* was preceded by the head toss. *Giggling* was less intense laughter. The mouth of the woman was often closed, and the sounds were generally softer.

Kissing was rather unusual. The slightly protruded lips were brought into contact with another person's body by a forward head movement.

Finally, the *whisper* consisted of the woman moving her mouth near another person's ear. Presumably, soft vocalizations were produced. Sometimes body contact was made.

Several nonverbal patterns involved movement of the hands and arms. *Arm flexion* occurred when the arm was flexed at wrist and elbow and was moved toward the body. It was often repeated two or three times

in a bout. This behavior was often followed by the approach of another individual toward whom the woman gazed. If the man was in close physical proximity, the woman sometimes used *tapping* to get his attention. The elbow or wrist was flexed repeatedly so that the woman's finger was moved vertically.

Women occasionally palmed. *Palming* occurred when the hand was extended or turned so that the palm faced another person for a brief period of time, less than five seconds. Palming was also recorded when the woman coughed or touched herself with the palm up.

In several women, rapid movements of the hands and arms were seen accompanying speech. This behavior was labeled *gesticulation.* Arms and hands, while held in front of the woman's torso, were waved or extended upward in an exaggerated, conspicuous manner. A hand gesture sometimes initiated by a woman was the *hand hold.* The woman grasped the man's hand so that her palm was next to the man's palm. Generally, this behavior had a long duration, more than one minute.

Several behaviors appeared related to each other because they involved inanimate objects. The first of these was the *primp.* In this gesture the clothing was patted or smoothed, although to the observer it appeared in no need of adjustment. A shirt was tucked in or a skirt was pulled down. On the other hand, the *skirt hike* was performed by raising the hem of the skirt with a movement of the hand or arm so that more leg was exposed. Instead of patting or smoothing clothing, women sometimes "played with" an object, called *object caress.* For example, keys or rings were often fondled.

Finally, many women touched other people in a caressing fashion. Each incident of caressing was considered separately in terms of the part of the body that was touched, because the message, in each case, may have been quite different. In a *caress (face/hair),* the woman moved her hand slowly up and down the man's face and neck area or tangled her hands in his hair. While the couple was seated, women have been observed stroking the man's thigh and inner leg, *caress (leg).* The *buttock pat,* however, occurred while the couple was standing, often while dancing. The woman moved her hand, palm side down, up and down the man's buttocks. Other items in this group included *caress (arm), caress (torso),* and *caress (back).*

Compared to the two categories just presented, some behaviors involved more of the body in movement. I called these *posture patterns. Lean* was a common pattern. Generally while seated, the woman moved her torso and upper body forward, which resulted in closer proximity to the man. This movement was sometimes followed by a *brush* or a *breast touch.* The brush occurred when brief body contact (less than five seconds) was initiated by the woman against another individual. In the breast touch, the upper torso was moved so the breast made contact with the man's body (usually his arm). Most often, the contact was brief (less than five seconds), but sometimes women maintained this position for several minutes.

Four other actions were similar to the brush and breast touch in that the woman made bodily contact with the man. In the *knee touch* the legs were brought into contact with the man's legs so that the knees touched. Interactants were always facing one another while seated. If the man and woman were sitting side by side, the woman may have initiated a *thigh touch.* The leg was brought into contact with the man's upper leg. *Foot to foot* resulted in the woman moving her foot so that it rested on top of the man's foot. Finally, rather than make contact with some part of her body, an observed woman sometimes took the man's hand and placed it on her body. I called this behavior *placement.*

Another constellation of behaviors appeared related to each other. All these behaviors were variations of some contact made between the woman's upper body and her partner's upper body. These were generally behaviors of long duration, more than one minute. The most common of these behaviors was the *shoulder hug.* In this signal, the partially flexed arm was draped on and around another person's shoulder. In contrast, the *hug* occurred when both arms were moved forward from a widespread position and around the man, thereby encircling him. The duration of this behavior, however, was brief (less than 10 seconds). *Lateral body contact* was similar to a shoulder hug except that the woman moved under the man's arm so that his arm was draped around her shoulders rather than vice versa. Similarly, *frontal body contact* occurred when the chest and thighs of the woman rested against the chest and thighs of the man. This behavior was like the hug except that there was no squeeze pressure and the arms did not necessarily encircle the other person. *Hanging* was similar to frontal body contact except that the man was supporting the woman's weight. This behavior was initiated by the woman, who placed her arms around the man's neck. She was then lifted off her feet while her torso and hips rested against the man's chest and hip.

Two behaviors involved whole body movement. These were called *parade* and *approach. Parade* consisted of the woman walking across the room. Rather than maintaining a relaxed attitude, the woman exaggerated the swaying motion of her hips. Her stomach was held in and her back was arched so that her breasts were pushed out; her head was held high. The other behavior that involved walking was *approach.* The woman went up to the man and stood very close, within two feet.

Some women followed an approach with a *request* dance. This was demonstrated nonverbally by the woman pointing and/or nodding in the direction of the dance floor.

Dance (female acceptance) was included because, by accepting a dance with the man, the woman maintained his attention. Another dancing behavior was one of the most frequently seen signals in women. It was called the *solitary dance* because, while seated or standing, the woman moved her body in time to the music.

Just as a woman, in agreeing to dance with a man, was telling him, nonverbally, that she was interested in him for the moment, she also told him so when she allowed him to sit at her table with her. Thus, *point/permission grant* was given a place in the catalog. The woman pulled out the chair for the man or pointed or nodded in the direction of the chair.

Aid solicitation consisted of several behaviors that involved the request of help by the woman. For example, the woman handed her jacket to the man and allowed him to help her put it on. Other patterns in this category included indicating that a drink be refilled, waiting to be seated, or holding a cigarette for lighting.

The final category of nonverbal courtship behavior was also a variety of posture patterns. Called *play,* these behaviors consisted of the woman pinching the man, tickling him, sticking out her tongue at him, or approaching him from behind, covering his eyes.

Procedure

Randomly selected teenage girls were observed in several courtship settings, including a shopping mall, an ice skating rink, a swimming pool, and at school-related events such as softball games and parties. Once I was seated where many teenagers were present, I numbered the girls. An attempt was made, through the use of more immature facial features, to select girls for numbering who appeared to be at the younger end of the age continuum (13-16) of the girls being observed. Then a random number generator was used to select the focal girl from those present and numbered. All girls were accompanied by at least one other female companion but were not in the company of boys. Male peers were present in each context in the company of same-gender friends. Observations were conducted only when at least 20 boys and girls had assembled. Other individuals, including adults, were present in each setting. In conducting observations of randomly selected girls accompanied by at least one other female companion, when a minimum number of potential participants as well as noneligible individuals were present in courtship settings, I replicated the conditions in Moore (1985) when the catalog of female courtship signals was compiled. Covert observations were conducted with the assistance of a concealed audio microcassette recorder or paper and pencil, when appropriate. The audio microcassette recorder was used to record data. I recorded all nonverbal courtship behaviors from the catalog described previously for each randomly selected girl. Also, I recorded responses made to girls by boys. Girls' conversations were not recorded. Focal individual sampling was employed; I observed one girl throughout an observation period.

Observation periods were kept short, at 30 minutes in view, after pilot research indicated that such a procedure was mandatory, given that the high activity level of adolescents made it impossible to observe them for longer periods. A stopwatch was used to count time. Any girl not observed for 30 minutes, in view, was eliminated from the sample.

Results

Although strict comparisons to the behaviors of women who participated in earlier studies are difficult, given the differentials in observation period and number of participants, a number of similarities to the behavior of women were apparent. There were also a number of key differences. As predicted in the first hypothesis, girls were similar to women in their exhibition of nonverbal behaviors in the presence of male peers. In addition, they used many of the same signals women used when signaling availability or interest. These results supported the first hypothesis. In this regard, girls exhibited 31 of the 52 signals used by women. They did not, however, use the more overt signals such as caressing. The frequencies for each signal for 100 girls are presented in Table 1.

One difference was the lower level of signaling exhibited by teenagers when compared to adults in Moore (1985). It became apparent early in the study that girls were much less attentive to boys, focusing much of their attention on their female companions. This lower level of flirtatious behavior (an average display frequency of 3.8 signals per girl and 44.6 per woman) was associated with fewer approaches by and interactions with potential partners (17 approaches to 100 girls and 42 approaches to 20 women).

Because of the differences in observation periods, perhaps a better way to look at this is to calculate the mean number of displays per hour of observation and the mean number of approaches by males per hour of observation. The figures for the mean number of displays per hour of observation were 44.6 for women and 7.6 for girls, whereas the figures for the mean number of approaches by males per hour of observation were 2.1 for women and .3 for girls. In looking at the mean number of approaches by males per observee, I found that there were 2.1 approaches for each woman in the catalog study, but .17 approaches for each girl observed here. These results confirm the second hypothesis. Particularly when compared to adults, this difference is striking, as most adult signalers were successful in attracting and sometimes maintaining the attention of partners. However, when the mean number of

Table 1

Frequencies of Nonverbal Courtship Behaviors Used by 100 Girls, Each Observed for 30 Minutes

Facial and Head Patterns	Frequency	Gestures	Frequency	Posture Patterns	Frequency
Type I glance (room or group) encompassing glance	49	Arm flexion	0	Lean	7
		Tap	0	Brush	3
Type II glance (short, darting glance)	32	Palm	1	Breast touch	0
Type III glance (gaze fixate)	10	Gesticulation	7	Knee touch	0
Eyebrow flash	2	Hand hold	1	Thigh touch	0
Head toss	42	Primp	17	Foot to foot	0
Neck presentation	4	Hike skirt	0	Placement	0
Hair flip	57	Object caress	5	Shoulder hug	0
Head nod	2	Caress (face/hair)	0	Hug	1
Lip lick	8	Caress (leg)	0	Lateral body contact	0
Lipstick application	0	Caress (arm)	0	Frontal body contact	0
Pout	2	Caress (back)	0	Parade	6
Smile	30	Caress (torso)	0	Hang	1
Coy smile	17	Buttock pat	0	Approach	0
Laugh	22			Request dance	1
Giggle	11			Dance (acceptance)	7
Kiss	0			Solitary dance	6
Whisper	0			Point/permission grant	1
Face to face	1			Aid solicitation	2
				Play or tease	27

Note: Catalog of nonverbal courtship behavior from "Nonverbal Courtship Patterns in Women: Context and Consequences," by M. M. Moore, 1985, *Ethology and Sociobiology,* 6, p. 240

approaches by males per display is calculated for each group, the figures are quite similar, .047 for women and .045 for girls.

What is also interesting, however, is that although girls used many of the same signals as women did, such as primping or pouting, the adolescents' signals appeared exaggerated. For example, when a woman tossed her head and ran her hand through her hair, the gesture was noticeable but quite subtle, but when a girl used the same signal she did so with broader movements and took longer to complete the action.

Other courtship behaviors were similarly exaggerated. It was interesting to note as well that when one girl used a particular courtship behavior, it was often mimicked by another girl in her company. On further analysis, I discovered that girls were most often imitating the behavior of the dominant girl in the group. Dominance was defined through measuring the average gaze time received by each group member. The dominant girl was the one who received the highest gaze frequency.

A final behavior worth noting was the strong reliance by adolescent girls on play behavior or teasing as a courtship signal. In this study, girls frequently played or teased when flirting. In this regard, the girls pinched, took food from, hit, etc., the boys they were signaling. Although women participants in earlier studies used play behavior as well, as can be seen in Table 2, it was less frequent. Among 20 women, play behavior was used twice, whereas among 100 girls, it was used 27 times during observation periods half as long. A better way to portray the more common exhibition of play behavior in girls is to look at the number of girls and women who made use of play behavior or teasing. Play was used by 2 of 20 women (10%), but 22 of 100 girls (22%) (some girls used play more than once). These results support the third hypothesis outlined previously.

Table 2

Courtship Behavior Age Comparisons

	Women	Girls
Number of females observed	20	100
Number of hours of observation	20	50
Observation period	60 minutes	30 minutes
Total number of displays	892	382
Mean number of displays per female	44.6	3.8
Mean number of displays per hour of observation	44.6	7.6
Number of approaches to females by males	42	17
Mean number of approaches by males per hour of observation	2.1	0.3
Mean number of approaches by males per female	2.1	.17
Mean number of approaches by males per display	.047	.045
Number of play signals	2	27

Discussion

For this article, the subtitle "Girls Just Wanna Have Fun" came from the Cyndi Lauper tune of the 1980s. This seems appropriate, given that for the girls in this study, flirting is not the serious business it is for their older sisters. Although girls in the early teens are interested in boys (indeed, I discovered when I inadvertently overheard conversations that they spent a great deal of time talking about

boys) and used a variety of nonverbal courtship signals, most of their attention was focused on their female companions. Similarly, in their study, Lockard and Adams (1980) also found less engagement in courtship behaviors for the younger age group (13-16) when compared to the older people (17-28) observed. The lower level of flirtatious behavior for each girl found here when compared to women studied earlier was associated with fewer approaches by and interactions with boys. It is possible that the shorter observation periods were a constraint in my ability to record the number and range of signals used by women in the earlier studies. Also, the fewer number of overall approaches to the girls by boys meant that a whole host of other behaviors designed to maintain the attention of a partner did not come into play.

It is also possible that the contexts selected for the observation of girls' courtship behaviors were not being used by them as courtship settings in the same way that adults gather in singles' bars. Shopping malls, swimming pools, skating rinks, and school activities, such as parties and athletic events, seemed to me to provide opportunities for interaction among teenagers. In this regard, Anthony (1985) found that teenagers listed "checking out" the other gender as a primary reason for going to the mall. Casual observations of teenagers at the pool or skating rink also indicate a great deal of interaction between boys and girls. Because the girls observed in this study could not go to singles' bars, these settings were used instead. Still, it is possible that another explanation for the fact that fewer signals were exhibited was the contexts selected for observation.

Although each girl received fewer approaches than did the women in the earlier study, as might be expected given the number of signals, the number of approaches per signal was remarkably similar. Obviously, with the small sample sizes, it is difficult to see this as anything but coincidence. Nevertheless, these findings point out the need for future research to assess the sensitivity of men and boys to courtship signaling.

It also may be that the lower level of signaling in girls was made up for by the exaggerated nature of their flirting. In fact, some dating experts (Burns, 1985; Virtue, 1994) encourage women to be more assertive in their use of nonverbal signaling. As mentioned previously, when a woman tosses her head and runs her hand through her hair (a common combination signal), the gesture is noticeable but quite subtle. When a girl uses the same signal, she does so with broader movements and takes longer to complete the action. This is not because teenage girls often cultivate hairstyles requiring a lot of maintenance, as demonstrated by the fact that most other courtship behaviors were similarly exaggerated. When girls primp, they go through an elaborate display of smoothing their clothing. Their laughter is more boisterous and lasts longer. Girls may exaggerate their movements because the high activity level and shorter attention span of teenagers require that girls use more overt behaviors to get boys to notice them. Teenagers were more mobile than adults in the contexts I studied, and so there was more danger that a potential partner would leave before any contact was made.

On the other hand, exaggerated signaling may simply reflect inexperience on the part of girls. One function of early signaling may be to allow girls to practice these nonverbal behaviors and thus refine their skills for use in the late teens and beyond. Udry and Eckland (1984) showed that physical attractiveness is highly correlated with age of marriage, with attractive men and women being more likely to marry young. Using an Evolutionary Theory framework, Buss (1989) found in a study of 10,047 individuals from 37 cultures located on 6 continents and 5 islands that men expressed a greater desire than women for young and physically attractive mates. Moore and Butler (1989), however, demonstrated that courtship signaling overrode attractiveness in determining the number of approaches by men.

One way to get practice would be to look to a more experienced girl for guidance. Other researchers (Goodchilds & Zellman, 1984; Green, 1985) pointed out the extent to which teenagers rely upon one another for information about sexuality. Thus, the girls in this study copied the behavior of the girl who dominated their group in terms of visual attention. The other girls paid great attention to her facial expressions and gestures and then mimicked them. This is something unheard of in the courtship signaling of women. Indeed, women appear to go to great lengths to stand out from their female companions, and that includes using different flirting signals at different times. That girls are not so similarly self-conscious would once again point to the hypothesis that they are playing at courtship in the early teens, just as they play or tease during courtship, and so are less concerned with the effectiveness of their behavior. It must be remembered that if they were too successful, it would detract from the central nature of their relationship with other girls.

The findings that girls used exaggerated courtship signals and often copied the flirtatious expressions and gestures of the dominant girl indicate that learning plays a central role in the development of nonverbal courtship behavior. Early adolescence is a period when learning how to attract male peers may have adaptive significance for girls at a later date. The practice of these courtship behaviors in the early teens would allow for an efficient signaling system to be in place by the time these girls select lifetime

partners and, presumably, the fathers of their children. Evolutionary theory would lead us to believe that nonverbal courtship signaling has adaptive significance for women in that these subtle indicators of interest allow women to pace the course of a relationship. This affords women an opportunity to assess indicators of a man's willingness and ability to donate resources. What is still unclear is whether nonverbal courtship behaviors exist in even younger girls and infants. The observation of flirtatious facial expressions and gestures in children would help to illuminate further the dual influence of learning and heredity.

Because the girls in this study are in the transitional phase of the early teens, they often relied on the comfortable behaviors of childhood, hitting, pinching, and teasing to signal their interest in boys. I have labeled these signals *play behavior,* although others refer to them as teasing. I believe their use provides a sense of security for girls as they enter a new venue, the adult world of male-female interactions. Lockard and Adams (1980) also found a stronger reliance on behaviors such as punching, elbow jabbing, and neck grabbing than on more intimate behaviors, such as kissing or hugging, in 13- to 16-year-old couples when compared to 17- to 28-year-olds. Although women use play signals, too, they appear to do so less commonly than girls and perhaps with the goal of assessing a man's receptivity to humor. For girls, play behavior or teasing is central in their relationships with boys. To the observer, a sense of fun dominates courtship in the early teens, as these girls, not long out of childhood, prepare through play for the world of adulthood.

That girls use play behavior or teasing to indicate interest in a boy would be expected, given their age. What was not predicted in the hypotheses was the reliance by some girls on copying others. One anecdotal piece of evidence may shed some light on the importance of experience and point the way to future research. As mentioned previously, one randomly selected girl was deaf. Although she exhibited only a few courtship signals, they had all the grace and subtlety of those given by women. Perhaps her use of American Sign Language had provided her with a wealth of experience in the nonverbal arena, and her more inexperienced classmates may simply need more time and practice to refine their courtship skills. Although a case cannot be made with only one example, the deaf girl included in this sample provides some indication that there may be differences to be explored in populations other than those traditionally studied. Research on persons with disabilities could add to the picture of courtship signaling being constructed.

Future research is needed to document other potential developmental differences in courtship signaling. Because dating is most common in the late teens and twenties and because researchers often rely on college students for research participants, many researchers have focused on these age groups. But it would be interesting to know what form nonverbal courtship behavior takes in women in their fifties, sixties, and beyond who are in the process of dating following divorce or the death of their spouse. Similarly, there is little information about the nonverbal courtship behavior of diverse populations, both outside the United States and within. Still to be documented are the courtship behaviors of gay men and lesbians, Blacks, Hispanics, and Asians. Finally, it is important to assess the role that nonverbal courtship signaling plays in established relationships in which the partners are experienced and familiar with one another. Only when we have more information can the findings of this study be put into context and the similarities and differences in courtship signaling between women and girls be better understood.

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